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GEOGRAPHIC SCHOOL BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

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1. Casablanca, Conference City, Is North Africa's New York *Roy*
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3. Geo-Graphic Brevities *Hoopes, Burnett, Kilian*
4. Subject Index to GEOGRAPHIC SCHOOL BULLETINS, Volume XXI



E. W. Brandes

HALF-PINT-SIZE PAPUAN TREE-DWELLERS HUNT TEN-GALLON-SIZE BIRDS

In Papua, the southeast section of New Guinea, birds grow large and men grow small. Tree-dwelling pygmies of the interior may be no more than four feet high, and they hunt the cassowary, among the world's largest birds, sometimes five feet in height. The bird, in addition to meat, is valued also for its breastbone and claws, which can be carved into murderously sharp tips for arrows. Now that American soldiers have cleaned the Japanese out of Papua, they may get acquainted with their strange native neighbors (Bulletin No. 2).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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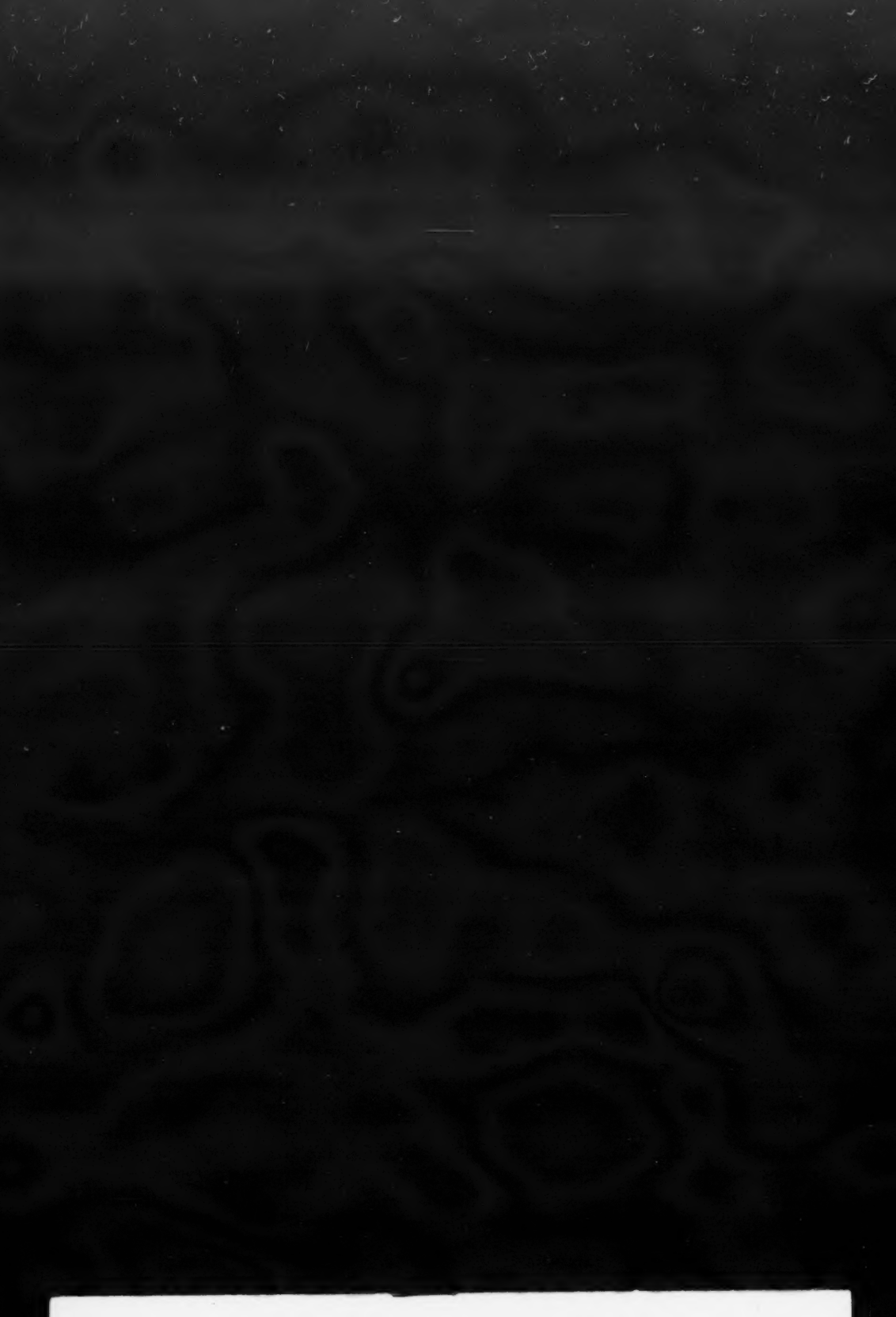
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Casablanca, Conference City, Is North Africa's New York

SMELLY, crowded *souks* and camels clumping through narrow streets—features of the popular notion of a Moslem city in Africa—definitely do not belong in the picture of Morocco's Casablanca, where President Roosevelt and Prime Minister Churchill met for their "Unconditional Surrender" conference.

One of the fastest-growing cities of Africa, most of Casablanca is nearly brand new, built under French supervision in the past thirty years. It has broad boulevards with palm-shaded green parkways between the traffic lanes. It has modernistic hotels twelve stories high, topped with penthouses. It has rambling suburbs of white and yellow stucco villas. It even has an ocean boulevard, a broad highway along the high bluff overlooking the blue Atlantic.

Birthplace of French Power in Morocco

This is the largest city of French North Africa, recently having surpassed Algiers after a neck-and-neck expansion for several years. An official census in 1936 gave Casablanca 257,000 people, and since then visitors to the seaside African metropolis have grumbled that the population must have been doubled by refugees from war in Europe. Europeans comprise at least a third of the people.

The finest Atlantic port north of Dakar, Casablanca in many ways deserves the title of North Africa's New York. Railways and highways through the French colonies reach to the port, there to swap commerce with the shipping lines that a peacetime world hopefully established.

The port, now the African anchor of supply lifelines reaching across the Atlantic to United States forces in North Africa, is entirely artificial. Forty years ago Africa's straight Atlantic coastline showed a couple of grudging dents at Casablanca's waterfront. Gigantic breakwaters now shelter 350 acres of anchorage suitable for the largest vessels. In harbor improvements alone the French have gambled 65 million dollars on Casablanca's commercial future.

This harbor was the threshold over which France advanced to power in Morocco. For nearly twelve hundred turbulent years an independent kingdom, Morocco was still resisting Europeans at the beginning of this century. Reluctantly the Sultan agreed to permit the French to establish a port at the insignificant Arab town of Casablanca. Workmen on the harbor improvements were attacked by hostile Moroccans on July 30, 1907, and there began a fray that finally brought a French fleet to shell the town into a shambles and a detachment of French troops to occupy the ruins.

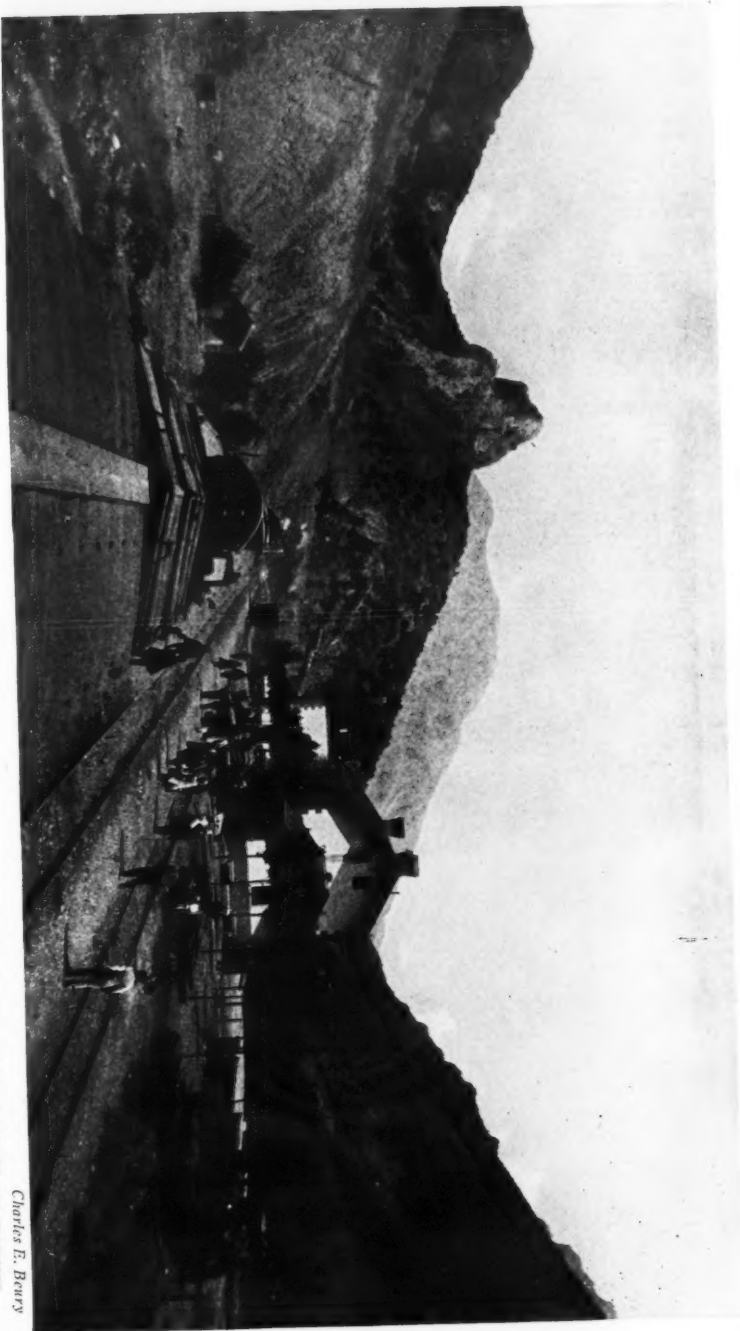
Morocco's "White House" Is Older than Washington's

Upon the wreckage of the captured town the French raised a white and shining city with such American-like speed that they borrowed an American word to describe it—"rush." The rush of modernizing has even clipped the city's name to an affectionate and abbreviated "Casa" among the inhabitants.

Casablanca is Spanish for "White House," a name traced to earlier occasions when the town was razed and rebuilt, shining and new.

Some historians wonder whether the city's earlier name—Anfa—might not identify it as a trading port established by a Phoenician Columbus, the historic Hanno who skirted Africa's Atlantic shores as far as Liberia.

In the mid-stretches of its history, while still Anfa, Casablanca was the home



Charles E. Bony

FREIGHT TRAINS TRAVEL THROUGH THE ROCKY GATE WHICH ONCE WAS ALEXANDER'S ROUTE TO THE ROUT OF TARUS

This freight train of the Baghdad Railway, pushing its way northwest from Iraq and the Levant States border across heavily forested southern Turkey, is headed for the Cilician Gate through the Toros (Taurus) Mountains. Completed in 1908, this section of the Baghdad Railway cuts the northeast corner of the Mediterranean coastal plain and utilizes the rocky pass through which Alexander the Great marched his army to capture Tarsus, in 333 B.C. The railway serves the chrome mines of the region and helps transport manganese from the deposits in the Ereğli area. Chestnut trees from these coastward slopes of the Toros range furnish ties for the railroad. Oak and walnut trees supply building lumber, which is floated down the Seyhan River from the forests and shipped to Egypt and Syria (Bulletin No. 3).

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The People of Pacified Papua, New Guinea's Southeast Quarter

AFTER the long-drawn-out cleaning up of Buna, Allied forces on New Guinea have announced that in Papua at least—the southeastern quarter of that giant South Seas island—there is no more fighting.

Papua is that portion of New Guinea directly under Australia's rule. It stretches from the hilly eastern tip of the huge island almost 800 miles before it meets the east boundary of Netherlands New Guinea, the island's western half.

Named for Natives' Frizzled Hair

The western section of Papua's 90,000 square miles is separated from Northeast New Guinea (a mandated territory, formerly German, under Australia's supervision since World War I) by a long and almost unbroken chain of mountain ranges.

The eastern section of Papua reaches from coast to coast, tapering Australiaward to New Guinea's southeasternmost tip. The Owen Stanley Mountains, rain-soaked heights over which the Allies so recently pushed back the Japs, make a rugged spine across tapering Papua, rising between the Buna-Gona area and Port Moresby, the government center for Australia's administration of the territory.

Papua was the name which once applied to the entire island of New Guinea. It comes from the Malay *papuwah*, meaning "frizzled," and was given to the island by an early explorer when he first saw the bushy-haired natives centuries ago.

Gold and the promise of oil once lured many early explorers into the heart of Papua, but more recently strict government regulations and a general "hands-off" policy regarding the natives have kept most white men out.

American soldiers now stationed in Papua, though equipped with a meager handful of native jargon, might find the going pretty tough in the tree-tangled jungle of the Papuan bushman's bailiwick. Civilization has touched the lives of natives living along the coasts, but the bushman of the interior still clings to age-old customs of his ancestors.

Most Houses on Stilts, Some "Skyscrapers" in Trees

It is in some of these more remote reaches, where government control is not yet wholly accepted, that natives still go on occasional head-hunting sprees.

Inland Papuans launch canoes with a ceremonial sprinkling of human blood. A dash of the same over a new house shows that the house is officially open.

A native may signify his grief and mourning by lopping off a joint of one of his fingers. White instead of black is a mourning color. A widow may mourn her husband's death by smearing her entire body with white pipe clay.

Natives of one village often cannot understand the dialect of the neighboring village, even though the settlements may be within an over-the-back-fence conversation distance. In coastal towns, use of pidgin English is fairly widespread.

A pig is a very important thing in the life of a Papuan. It is both a food and a symbol of friendship—and all too frequently the cause of tribal feuds. The wedding "cake" at a Papuan marriage is most likely to be a pig, and the bride's dowry consists of pigs. A good host gives guests a hunk of pork to take home.

Although architecture varies from village to village, a great number of the native houses, especially along the coast, are built on stilts. The "ground" floor is just ground. It is frequently given over to the pigs and dogs.

port of pirates, whose looting eventually brought reprisal to the town from the angry Portuguese in 1465. Determined to wipe out the sea raiders, the Portuguese destroyed old Anfa a century later, then rebuilt it as Casa Branca (White House). The Moroccan Sultan who rescued it from Europeans in 1757 christened it with the same name in Arabic, Dar-el-Baida. Spanish merchants in the 19th century called it Casablanca. So Morocco had a White House in three languages long before the "President's Palace" in the United States received the title.

About 3,600 miles across the Atlantic from New York City, Casablanca is in the southern latitudes of Charleston, South Carolina, and Atlanta, Georgia.

Note: Casablanca may be located on the National Geographic Society's Map of Africa, which was issued as a supplement to the February, 1943, issue of the *National Geographic Magazine*. A price list of maps may be obtained from the headquarters of the Society in Washington, D. C.

For further information, see these articles in the *National Geographic Magazine*: "Eastward from Gibraltar," January, 1943; and "Across French and Spanish Morocco," March, 1925; and these *GEOGRAPHIC SCHOOL BULLETINS*: "Thumbnail Gazetteer of Embattled French North Africa," November 30, 1942; and "French Northwest Africa Approaches Size of U. S.," May 5, 1942.

Bulletin No. 1, February 15, 1943.



E. Michaud

IN A FRENCH SETTING, A MOORISH FINGER POINTS OUT THAT TIMES CHANGE

The Place de France is the central square from which Casablanca's main streets radiate like wheel spokes. In keeping with its French name, it is surrounded by fine French hotels and office buildings. But reminders of the African locale are the palm trees and the Moorish-style clock tower. Bright with tile designs and airy with Moorish arches, this tower appears deceptively old. Though antedating its surroundings, it was built in 1910 by a Frenchman.

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Geo-Graphic Brevities

LORIENT, LAIR OF AXIS SUBMARINES

AS FLEETS of Axis submarines in the Atlantic take a constantly increasing toll of shipping, planes from Britain increase their raids on Lorient, port on France's Brittany coast midway between Brest and St. Nazaire.

As the port had cranes and drydocks for complete submarine overhauling, and was conveniently situated as a base for undersea raids on English Channel and North Sea shipping (as well as convoys crossing the Atlantic), the Nazis immediately turned it into a submarine base after the fall of France in 1940.

Lorient's deep-water harbor is four miles from the sea on the west bank of the bay formed by the junction of the Scorff and Blavet Rivers.

For many years France's chief port for naval construction, and site of a naval arsenal, Lorient was named by the Compagnie de l'Orient (the French East India Company), which established warehouses and shipyards there in 1664.

Lorient's 50,000 residents were principally engaged in shipbuilding, shipping, and warehousing, although many thousands were fishermen. Sardine fishing in the Bay of Biscay, in the coastal waters from Lorient west to Concarneau, has made Brittany world-famous as the home of this small and popular fish.

TURKEY, A GOOD VESTIBULE, WOULD MAKE BAD BATTLEFIELD

AN AGES-OLD land-bridge between Europe and Asia, Turkey has for centuries funneled traffic between the two continents through Istanbul.

With war on every side, however, Turkey can reflect with satisfaction that her travel facilities have many drawbacks to discourage would-be invaders.

Inhabited by shepherds and farmers since the earliest times, the country's mountainous east is crisscrossed by an intricate network of foot trails and bridle paths, with occasional third-rate roads that often peter out on steep slopes or in rocky gorges (illustration, next page).

Only two highways cross central Turkey to the eastern border. The southern one winds past Mt. Ararat into northwest Iran. The northerly one, from the Black Sea port of Trabzon, cuts southeast over the mountains to Erzurum, where it branches to extend one arm into the U.S.S.R. and the other into Iran.

The one through rail line of this region is a line of many interruptions. It runs through Anatolia and Erzurum to the U.S.S.R. Travelers and freight must change trains twice along the way, because the tracks are of three different widths—standard European gauge to Erzurum, narrow gauge to Sarikamis, and east of there, Russian gauge, wider than the European.

A short narrow-gauge line runs from Karakose in eastern Turkey into Iran.

Into Syria and Iraq, Turkey's transportation is less limited. The newly completed Berlin-Baghdad Railroad links Europe with Syria and Iraq (illustration, inside cover). Another rail line sweeps across southeastern Turkey to the border town of Cizre, where it meets a good highway into Iraq.

FOURTH-OF-JULY CELESTITE PAINTS WAR SCENES RED

CELESTITE, old stand-by of the fireworks industry, has packed up its Fourth-of-July sparks and sky-streaks and gone to war.

In peacetime this mineral furnished the red blaze for fireworks. Now it flashes red as the tracer bullet starts on its glowing trail.

The hammock that swings under many a house is not for a drowsy native. It is the "resting" place in which a chosen pig fattens for a feast.

Tree-dwellers in southwest Papua build their own "skyscrapers," although they are equipped only with stone axes. These tallest of houses, perched in trees 60 feet above the ground, are often occupied by the shortest of Papuans—pygmies between four and five feet tall.

Note: Papua is shown on the National Geographic Society's Map of the Indian Ocean, and Map of the Theater of War in the Pacific.

For additional material on Papua, see these articles in the *National Geographic Magazine*: "Treasure Islands of Australasia," June, 1942; "Into Primeval Papua by Seaplane," September, 1929*; "Pictorial Jaunt Through Papua," January, 1927*; and the following *GEOGRAPHIC SCHOOL BULLETINS*: "The Buna-Gona Sector of the New Guinea Front," January 4, 1943; "Rain Hampers Both Sides in New Guinea Battles," November 16, 1942; and "Gold and Savages on New Guinea," March 30, 1942. (*Issues marked with an asterisk are included in a special list of Magazines available to teachers at 10¢ a copy, in groups of 10.*)

Bulletin No. 2, February 15, 1943.



Frank Hurley

THE FLOUR MILLER OF PAPUA IS FIRST A LUMBERJACK

Instead of wheat flour or corn meal, the Papuan eats sago flour. Some natives plant the slow-growing sago palms around the village for their heirs, whose property the full-grown palms become. Natives without private sago groves find the palm growing wild in swamps. The men cut down a swamp palm and shave off its bark (background). Others patiently pound the palm's pithy central core with crude mallets (foreground) to chip off the starchy fibers. These they turn over to the women, who wash the sticky pulp in wooden basins and collect the starch grains of "flour" that float out. Sago flour is stored in cylinders of dry bamboo.

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Approximately every fifth bullet shot from American machine guns is the torchbearing type of missile known as a tracer. To each of these bullets is attached a small combustible pellet, containing celestite, which ignites on leaving the gun. From its flaming path the gunner can observe the course of the bullet's flight, estimate how near it came to the target, and correct his aim.

A plaything in peacetime and a pathfinder for bullets in war, celestite has other military duties as a side line. The bright glow of flares lighting up the battle scene, the parachute distress signal, the signal flare shot to the surface from a submerged submarine—all get their dazzling red from celestite.

Blackout signs in London "glow" because of celestite in the paint.

But the battle-torch mineral need not be unemployed at war's end. In peace celestite has many jobs in addition to its sparkling fireworks career—brightening paints, serving as filler in sealing wax and rubber, making signal flares for railroads and distress rockets for steamships. The rayon industry has used celestite to remove impurities from caustic soda.

This mineral owes its heavenly name not to the fact that it soars into celestial heights in war and peace, but to the celestial blue tinge of some of its crystals. It was named for crystals taken from rocks in Pennsylvania the year before George Washington died. Chemists call it strontium sulphate.

California has one of the largest deposits in the U. S. From New York down to the Sergeant York country of Tennessee, celestite is found. In Texas it has been mined, ground, and used as a lubricant in oil-well drilling.

Before the war the U. S. imported the mineral from Great Britain and Germany. War needs may force the U. S. to dig deeper at home to supply a military machine which already consumes about 90 per cent of amounts now available.

Bulletin No. 3, February 15, 1943.



John D. Whiting

WHERE BALKY DONKEY TRAFFIC ROLLS RIGHT ALONG, MODERN MOTORS BALK

On the high plateau of eastern Turkey most of the roads carry a steady stream of oxcarts and caravans of small top-heavy donkeys, both helping to wear deep grooves in mountain roadbeds. To avoid ruts, this automobile has ventured on a highway's rocky borders and has run upon a rock that lifts the rear wheels off the road. While a mule caravan ambles past, mule drivers and pedestrians are helping to lift the car off the rocks. Although bus service is maintained on many of Turkey's highways, motor hazards are frequent.

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 No. 3: Ribbon-Shaped Chile, the Three-in-One Republic, 2 ill., 1 map, Dec. 14, 1942.
 No. 4: Compact Uruguay, the "Purple Land" of Pastures, 2 ill., 1 map, Jan. 4, 1943.
 No. 5: Inland Paraguay a Potential Garden Spot, 2 ill., 1 map, Jan. 11, 1943.
 No. 6: Mountain-Tiered Bolivia, Mineral War Chest, 2 ill., 1 map, Jan. 18, 1943.
 No. 7: Peru, Home of Empire Builders, 2 ill., 1 map, Jan. 5, 1943.
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Turkey, A Good Vestibule, Would Make Bad Battlefield, 2 ills., Feb. 15, 1943 (Geo-Graphic Brevity).
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- Ammunition:** Fourth-of-July Celestite Paints War Scenes Red, Feb. 15, 1943 (Geo-Graphic Brevity).
- Balata Gum:** Balata Gum, Cousin of Gutta Percha, Drafted for Military Service, 1 ill., Nov. 30, 1942 (Geo-Graphic Brevity).
- Bananas:** Banned Banana Goes into Partial Eclipse, Feb. 1, 1943.
- Bazaars:** Ill.: Tea House in corner of bazaar, Afghanistan, Apr. 20, 1942.
- Bristles:** Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.
- Butter:** Ill.: Women churning butter, Tunisia, Dec. 7, 1942.
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U. S. Troops Find Gold Coast Chocolate-Covered, Oct. 26, 1942.
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- Cattle Raising:** Compact Uruguay, the "Purple Land" of Pastures, 2 ills., 1 map, Jan. 4, 1943.
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- Celestite:** Fourth-of-July Celestite Paints War Scenes Red, Feb. 15, 1943 (Geo-Graphic Brevity).
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- Copper:** War Takes Nickel out of "Nickel," Finches Pennies, Mar. 30, 1942.
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Textile-Famed Madras Has Enriched the English Language, May 11, 1942 (Geo-Graphic Brevity).
- Diamonds:** Belgian Congo Riches on United Nations' Side, Mar. 23, 1942.
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War Booms Shark Fishing, 1 ill., Oct. 19, 1942 (Geo-Graphic Brevity).
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Ports of Northwest Italy Cringe Beneath Bombs, Feb. 8, 1943.
Toulon, the Scapa Flow of World War II, Jan. 4, 1943 (Geo-Graphic Brevity).
- Hay:** Ill.: Albanians carrying hay, Nov. 16, 1942.
- Hides:** Ill.: Montevideo, Uruguay, Jan. 4, 1943.
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Italy Lacks Raw Materials for War Machine, 1 ill., Jan. 25, 1943 (Geo-Graphic Brevity).
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Additional ill.: Steel parts of ships on train, Jan. 18, 1943.
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- Lumbering:** Building Materials Join War Effort, Mar. 2, 1942.
Additional ill.: Elephants pushing teak logs in stream, Burma, Mar. 23, 1942.

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Fighting Igorots of the Philippines, Mar. 16, 1942.

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Réunion Island: Réunion Island, Isolated Bit of France in Indian Ocean, Jan. 11 1943 (Geo-Graphic Brevity).

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Solomon Islands, Where Marines and Japs Clash, Oct. 5, 1942.

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Additional ill.: Native spreading vanilla seed pods, Feb. 23, 1942.

Timor: Rangoon to Caeterra: Capitals Seized or Threatened, Mar. 30, 1942.

Torres Strait Islands: See Australia.

Virgin Islands: Virgin Islands Face Second War under U. S. Flag, Mar. 20, 1942.

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Islands in the News, Feb. 1, 1943.

Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).

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Maps and Map Making: Geographic Maps Lead Fighters Through Enemy Waters, Feb. 8, 1943 (Geo-Graphic Brevity).

New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.

Maps: Egypt (pictorial map), showing Nile River, Oct. 5, 1942; Panama, showing Canal Zone, May 4, 1942; Rhine River, Oct. 12, 1942.

Latin American Series: Argentina, Dec. 7, 1942; Bolivia, Jan. 18, 1943; Brazil, Nov. 30, 1942; Chile, Dec. 14, 1942; Colombia, Feb. 8, 1943; Ecuador, Feb. 1, 1943; Paraguay, Jan. 11, 1943; Peru, Jan. 25, 1943; Uruguay, Jan. 4, 1943.

Additional ill.: Ancient map of Asia, Nov. 30, 1942.

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Additional ills.: Building training planes for R. A. F., California, Feb. 23, 1942; Transport planes, LaGuardia Field, New York, May 11, 1942; U. S. Navy patrol bomber, May 11, 1942; Women workers sorting airplane rivets, San Diego, May 11, 1942; Airport terminal, Baghdad, Iraq, Feb. 8, 1943.

Animals: Ills.: Camels: Tunisia, Dec. 14, 1942; Courier for British forces riding, North Africa, Jan. 14, 1943; Drawing bucket from well, French Equatorial Africa, Jan. 11, 1943; Palanquin, Libia, Jan. 25, 1943.

Burros and donkeys: Burro-power drill, Bolivia, May 18, 1942; Donkeys, Guatemala, Nov. 2, 1942.

Burro loaded with olive oil cans, Lisbon, Portugal, Jan. 4, 1943. Elephants: Pushing teak logs, Burma,

Mar. 23, 1942; Perahera celebration, Ceylon, Apr. 27, 1942. Horses: Pulling wagons of sugar beets,

Utah, Mar. 9, 1942; British Honduras, May 18, 1942; Pulling ancient Egyptian chariot (painting),

Oct. 5, 1942; Plowing, Morocco, Nov. 23, 1942; Gaucho on horse, Argentina, Dec. 7, 1942. Mules:

Pulling wagonload of cork, Seville, Spain, Mar. 23, 1942; Loading, with bananas, Panama, Feb. 1,

1943. Oxen: Hauling carts, Madagascar, May 11, 1942; Drawing dumpcart, Amboina, Feb. 23,

1942. Water buffalo drawing cart, Sumatra, Mar. 9, 1942. Zebu drawing cart, Gôa, India, May

4, 1942.

See also Commerce, Industry, and Agriculture: Cattle raising; Sheep and sheep raising; and Natural History: Animals.

Automobiles: Ills.: Air view of automobile body plant, Adelaide, Mar. 16, 1942; Plowing with automobile-tractor, New York, May 11, 1942; On road to Kilauea crater, Hawaii, Apr. 13, 1942; Burma Road, May 18,

1942; On highway at Batrun, Levant States, Oct. 26, 1942; On mountain highway, Turkey, Feb.

15, 1943.

Boats and Ships: Ills.: Loading Edam cheeses on freighter, Alkmaar, Netherlands, Feb. 23, 1942; Native sailing boat (*galatol*), New Guinea, Mar. 30, 1942; Snake charmer on board ship, Ceylon, Apr. 27, 1942;

Ship going through Panama Canal, May 4, 1942; Sailing ships, Gôa, India, May 4, 1942; Russian

tankers, Caspian Sea, Oct. 5, 1942; Ship, North Cape, Norway, Oct. 19, 1942; Boat on shore, St.

Lawrence River; Marine landing party, Nov. 9, 1942; Ship, Fiji Islands, Nov. 23, 1942; Ship, Algiers,

Nov. 30, 1942; Ship parts, Jan. 18, 1943; Fishing boats, Lake of Garda, Italy, Jan. 25, 1943.

Bridges: Suchiate River Gets Anti-Submarine Bridge, Jan. 25, 1943 (Geo-Graphic Brevity).

Additional ills.: Railway bridge, Fuji River, Japan, May 18, 1942; Hangchow, China, Oct. 19, 1942;

Aqueduct bridge, Rio de Janeiro, Brazil, Nov. 30, 1942; Viscas Bridge, Peru, Jan. 25, 1943.

Buses: Ill.: Air-conditioned bus, Baghdad, Iraq, Feb. 8, 1943.

Canals: Pirate-Fighting Panama Strengthens Defenses, 1 ill., 1 map, May 4, 1942.

Additional ill.: Grand Canal, Hangchow, China, Oct. 19, 1942.

Canoes: Ills.: Dugout canoes, Lake Patzcuaro, Mexico, Mar. 2, 1942; Solomon Islands, Nov. 9, 1942. Outrigger canoes, Marshall Islands, Mar. 2, 1942. Burmese canoes, Mar. 23, 1942; War canoe, Solomon Islands,

Oct. 5, 1942.

Carts and Wagons: Ills.: Handcarts, Sète, France, Mar. 2, 1942; Ox-drawn dumpcart, Amboina, Feb. 23, 1942; Two-wheel carts, Sumatra, Mar. 9, 1942; Wagonload of cork, Seville, Spain, Mar. 23, 1942; Pulling

barrel of molasses on "spider," Barbados, Feb. 1, 1943.

Chariots: Ill.: Ancient Egyptian chariot (painting), Oct. 5, 1942.

Escalators: Ill.: Subway escalator, Buenos Aires, Argentina, Dec. 7, 1942.

Highways and Roads: Alaska-Canada Highway To Open a New "Last Frontier," 2 ills., Apr. 27, 1942.

Georgian Military Road—130 Miles of Scenery and Danger, Nov. 23, 1942.

India Road to China, a Burma Road Substitute, Mar. 16, 1942.

New Allied Life Line Across Africa, Mar. 9, 1942.

World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

Additional ills.: Road to Kilauea crater, Hawaii, Apr. 13, 1942; Burma Road, May 18, 1942; Batrun,

Levant States, Oct. 26, 1942; mountain highway, Turkey, Feb. 15, 1943.

Motorcycles: Ill.: Courier for British forces riding motorcycle in desert, North Africa, Jan. 4, 1943.

Pipe Lines: Iraq, Arabian Nights Land, a Moslem Ally for United Nations, Feb. 8, 1943.

World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

Costumes and Clothing—Continued

States, Oct. 26, 1942. Shepherds: Peruvian shepherdess, Mar. 2, 1942; Shepherd wearing poncho, Bolivia, Jan. 18, 1943. Koreans (2 ills.), Nov. 9, 1942. Veiled women, Algiers, Nov. 30, 1942. Woman of desert nomad tribe, Sahara Desert, Dec. 7, 1942.

Dams: World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

See also Commerce, Industry, and Agriculture: Irrigation.

Dancers and Dancing: Ill.: Nashi priests, China, Feb. 1, 1943.

Dwellings: Building Materials Join the War Effort, Mar. 2, 1942.

Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

Oddities of Tunisia, Jan. 4, 1943.

War Homes Make Changes in Nation's Landscape, Mar. 16, 1942.

Additional ills.: Huts: Fiji Islands, Nov. 23, 1942; Bolivia, Jan. 18, 1943; Madagascar, Oct. 12, 1942; New

Guinea (air view), Mar. 30, 1942; Jungle village, Sumatra, Mar. 2, 1942; Tinguéré, Africa, Mar. 9, 1942.

Mud-and-wattle house, Belgian Congo, Mar. 23, 1942; Half-underground winter home, Aleutian

Islands, May 11, 1942; Tananarive, Madagascar, May 11, 1942; Native home, British Honduras,

May 18, 1942; Camp in jungle, Guatemala, Nov. 2, 1942; Korean home, Nov. 9, 1942; Djerba (island),

Tunisia, Dec. 14, 1942; Home of Columbus, Genoa, Italy, Feb. 8, 1943.

Ills.: Russian school, Oct. 12, 1942; Outdoor class in agriculture, U. S. S. R., Jan. 11, 1943.

Education: See Races and Tribes: Aleuts.

Expeditions and Exploration: Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

Peru. Home of Empire Builders (reference to National Geographic Society-Yale University expedition),

2 ills., 1 map, Jan. 25, 1943.

Scientists Kept Digging in 1942, Jan. 18, 1943.

Additional ill.: Dr. and Mrs. Mann visiting jungle village, Sumatra, on National Geographic Society-

Smithsonian Institution East Indies Expedition, Mar. 2, 1942.

Ills.: Chile, Dec. 14, 1942; Uruguay, Jan. 4, 1943.

ABC's of Vitamins for Victory, May 4, 1942.

Romans Ate Sandwiches, Too, Jan. 4, 1943 (Geo-Graphic Brevity).

Tin Can: A Trash-to-Treasure Success Story, Apr. 13, 1942.

What Foods for the United States Come from Abroad? 3 ills., Feb. 23, 1942.

Additional ills.: Family eating rice, Thailand, Apr. 20, 1942; Aviation Cadets at mealtime, Randolph

Field, May 18, 1942; Chinese food, Nov. 16, 1942; preparing sago flour, Papua, Feb. 15, 1943.

See also Commerce, Industry, and Agriculture: Bananas, Butter, Cacao, Cheese, Coffee, Fish and

Fishing, Maté, Molasses, Peanuts, Pineapples, Rice, Salt, Sugar, Tea, Vanilla, and Natural History:

Fruit.

Forts and Fortresses: Rocky Fortress of Corregidor a Philippine Gibraltar, Mar. 2, 1942 (Geo-Graphic Brevity).

Additional ill.: Ancient Indian fortress, Sacsahuaman, Peru, Jan. 25, 1943.

Guns: What Do You Know about Tanks? 2 ills., Nov. 23, 1942.

Additional ill.: Forging gun, Germany, Feb. 1, 1943.

See also Commerce, Industry, and Agriculture: Ammunition.

Handicrafts: Ills.: Women weaving with hand loom, Northern Ireland, Feb. 23, 1942; Hopi Indian painting pottery,

New Mexico, Mar. 16, 1942; Native women making pottery, Belgian Congo, Mar. 23, 1942.

Holidays, Celebrations, and Customs: Christmas Comes with the Kings, South of the Border, Dec. 14, 1942.

Soviet Union to Observe 25th "Independence Day," Nov. 9, 1942 (Geo-Graphic Brevity).

Additional ills.: Perahera procession, Ceylon, Apr. 27, 1942; Bridal palanquin, Libya, Jan. 25, 1943.

Indians: Ecuador: Equator Land of Ice and Volcanic Fire, 2 ills., 1 map, Feb. 1, 1943.

Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

Peru. Home of Empire Builders, 2 ills., 1 map, Jan. 25, 1943.

Scientists Kept Digging in 1942, Jan. 18, 1943.

Additional ills.: Tarascan Indian, Lake Pátzcuaro, Mexico, Mar. 2, 1942; Hopi Indian painting pottery,

New Mexico, Mar. 16, 1942; Tehuana Indian women, Tehuantepec, Mexico, Apr. 20, 1942; Indian

boys, Yukon, Apr. 27, 1942; Indians on horseback, Dec. 14, 1942; Bolivia, Jan. 18, 1943.

Lighthouse: Ill.: Ruins of Roman lighthouse, Dover, England, Apr. 27, 1942.

Marines: Happy Birthday!—Tell It to the Marines, Nov. 9, 1942.

U. S. Naval History Once Was Made at Tripoli, Jan. 18, 1943.

Music and Musicians: Ill.: Native band, Fiji Islands, Nov. 23, 1942.

National Geographic Magazine: Casein Can Make Miss Muffet a Modern Glamor Girl (reference to paper used

in National Geographic Magazine), Jan. 11, 1943.

National Geographic Society: Banned Banana Goes into Partial Eclipse (reference to National Geographic Society

expeditions to Central America), Feb. 1, 1943.

Geographic Maps Lead Fighters Through Enemy Waters, Feb. 8, 1943 (Geo-Graphic Brevity).

Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.

Peru. Home of Empire Builders (reference to National Geographic Society-Yale University expedition),

2 ills., 1 map, Jan. 25, 1943.

Additional ills.: Dr. and Mrs. Mann visiting jungle village, Sumatra, on National Geographic Society-

Smithsonian Institution East Indies Expedition, Mar. 2, 1942; National Geographic Society-Smith-

sonian Institution expedition unearthing tomb, La Venta, Mexico, Jan. 18, 1943.

Pearl Divers: Ill.: Bahrain Islands, Nov. 2, 1942.

Pencils: Graphite for Writing and Fighting, Jan. 25, 1943.

Population: Defense Cities, Splitting at Seams, Report Population Boom, Feb. 23, 1942.

Prisons: Japan's Prison Island for Americans, May 4, 1942 (Geo-Graphic Brevity).

Additional ill.: Ile Royale, French Guiana, Feb. 23, 1942.

Pyramids: Ill.: Pyramids of Giza, Egypt, Oct. 5, 1942.

Races and Tribes: Fighting Igorots of the Philippines, Mar. 16, 1942.

Gold and Savages on New Guinea, World's Second Largest Island, 3 ills., Mar. 30, 1942.

Oddities of Tunisia, Jan. 4, 1943.

People of Pacific Papua, New Guinea's Southeast Quarter, 2 ills., Feb. 15, 1943.

Varied Peoples of India, 3 ills., Apr. 20, 1942.

Additional ills.: Aleuts, Aleutian Islands, May 11, 1942; Oct. 19, 1942. Arabs: Libia, Jan. 11, 1943;

Pearl divers, Bahrain Islands, Nov. 2, 1942. Copts, Eritrea, Oct. 19, 1942. Chinese (2 ills.), Nov. 16,

1942. Filipinas, Hawaii, Nov. 23, 1942. Koreans, Nov. 9, 1942. Moslems: Tunisia, May 4, 1942;

Moslem children, Delhi, India, Jan. 18, 1943. Nashi priests, China, Feb. 1, 1943. Natives: Spread-

ing vanilla seed pods, Tahiti, Feb. 23, 1942; On outrigger canoe, Marshall Islands, Mar. 2, 1942;

Carrying pig, Bali, Mar. 9, 1942; Children in doorway of home, Cameroons, Africa, Mar. 9, 1942;

Woman making pottery, Belgian Congo, Mar. 23, 1942; Fishing under water, Sulu Archipelago, Mar.

23, 1942; Solonoi Islands, Oct. 5, 1942; (2 ills.) Nov. 9, 1942; Medicine man, Madagascar, Oct.

12, 1942; Fiji Islanders, Nov. 23, 1942; Carrying sacks of peanuts, Dakar, Senegal, Dec. 14, 1942;

New Guinea, Mar. 30, 1942; Jan. 4, 1943. Thailand family eating rice, Apr. 20, 1942.

See also Indians.

Religions: Bombs May Disturb Strange Parsi Funeral Rites, Nov. 2, 1942 (Geo-Graphic Brevity).

Varied Peoples of India, 3 ills., Apr. 20, 1942.

Additional ills.: Buddhas, Paungu Caves, Burma, Mar. 23, 1942; Wooden idols with pig jawbones, New

Hebrides, Dec. 14, 1942; Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943; Nashi priests

dancing before religious banners on outdoor altar, China, Feb. 1, 1943.

Sailors: Ills.: Sailors and marines, Nov. 9, 1942; U. S. sailor, Shanghai, China, Nov. 16, 1942.

Sculpture: Ills.: Jaguar altar, Mexico, Mar. 16, 1942; Carved marble interior of Jain temple, Rajputana, India,

Apr. 20, 1942; Sphinx, Egypt, Oct. 5, 1942; Columns of ancient temple and carved figure, Mexico, Nov.

2, 1942; Ancient carved-stone statue, Colombia, Feb. 8, 1943.

Sewing Machine: Ill.: Boy playing with sewing machine, Djibouti, French Somaliland, Jan. 25, 1943.

- Manganese:** Strategic Materials (No. 11): Manganese by the Spoonful for Steel, May 4, 1942.
- Markets and Venders:** Ills.: Hat vender, Ecuador, Nov. 16, 1942; Fez, Morocco, Dec. 7, 1942; Arabs, Bengasi, Libya, Jan. 11, 1943; Olive oil peddler with burro, Lisbon, Portugal, Jan. 4, 1943; Meat market, Tripoli, Libya, Jan. 18, 1943.
- See also Bazaars.*
- Maté:** Ill.: Gaucho drinking maté, Argentina, Dec. 7, 1942; Smoking yerba maté leaves, Paraguay, Jan. 11, 1943.
- Metals:** Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.
- Why Is Scrap Metal Necessary?* Oct. 5, 1942.
- See also Aluminum, Copper, Gold, Iron and Steel, Manganese, Nickel, Platinum, Silver, and Tin.*
- Milk:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.
- Mines and Minerals:** Americans in New Caledonia Are Far from Home, May 18, 1942.
- Cornwall's Tin "Pixies" to Help United Nations, 1 ill., Oct. 5, 1942 (Geo-Graphic Brevity).
- Mountain-Tiered Bolivia, Mineral War Chest, 2 ill., 1 map, Jan. 18, 1943.
- Ribbon-Shaped Chile, the Three-in-One Republic, 2 ill., 1 map, Dec. 14, 1942.
- Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.
- Yunnan, China's Back Door Province of Mines and Magic, Feb. 1, 1943.
- Additional ill.: Copper mine, Chile, Mar. 23, 1942.
- See also Celestite, Diamonds, Graphite, Metals, and Quartz crystal.*
- Molasses:** Ill.: Pulling barrel of molasses on "spider," Barbados, Feb. 1, 1943.
- Nickel:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.
- Oil:** Gasoline a Young Problem Child of Old Oil Industry, Jan. 25, 1943 (Geo-Graphic Brevity).
- Oil-Thirsty Australia Reaches Across Oceans for Fuel, Feb. 8, 1943 (Geo-Graphic Brevity).
- Petroleum Is a Stake in Burma, Apr. 27, 1942 (Geo-Graphic Brevity).
- Russian Oil, Magnet of the Caucasus, Oct. 5, 1942.
- Santa Elena Peninsula in Ecuador's Oil Area, New U. S. Base, Nov. 16, 1942.
- Additional ill.: Oil geologist, New Guinea, Nov. 16, 1942.
- See also Transportation: Pipe Lines.*
- Paper:** Waste Paper Goes to War, Apr. 27, 1942.
- Additional ill.: Planting pineapples in paper, Hawaii, Apr. 13, 1942.
- Peanuts:** Peanuts Volunteer for Front-Line Duty, Apr. 27, 1942.
- Additional ill.: Native carrying sack of peanuts, Dakar, Sénégal, Dec. 14, 1942.
- Pigs:** Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.
- Additional ill.: Native carrying pig, Bali, Mar. 9, 1942; Pigs on Iowa farm, Nov. 16, 1942; Idols wearing jawbones of pigs, New Hebrides, Dec. 14, 1942.
- Pineapples:** Ill.: Planting in paper, Hawaii, Apr. 13, 1942.
- Plastics:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.
- Platinum:** Ill.: Nuggets, Apr. 20, 1942.
- Power Plant:** Ill.: Power plant, Lake of Garda, Italy, Jan. 25, 1943.
- Priorities:** Priorities That Geography Built, 2 ill., Mar. 23, 1942.
- See also individual items.*
- Quartz Crystal:** Strategic Materials (No. 12): Quartz Crystal, Robot Boss of Radio, 2 ill., May 11, 1942.
- Rayon:** Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.
- Rice:** Japan Now Controls the Orient's Export Rice, 1 ill., Apr. 20, 1942 (Geo-Graphic Brevity).
- Rubber:** Rubber Bond Cements Pan American Relations, 2 ill., Apr. 13, 1942.
- Salt:** Ill.: Natives carrying salt, Eritrea, Oct. 19, 1942.
- Sheep and Sheep Raising:** Ills.: Earmarking sheep, Argentina, Mar. 9, 1942; Shepherds, Caucasus Mountains, Nov. 23, 1942; Drying sheepskins, Chile, Dec. 14, 1942.
- See also Peoples and Cultures: Shepherds.*
- Silk:** Silk Salvage Completes a Stocking Cycle, Nov. 30, 1942.
- Silver:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.
- Steel:** *See Iron and Steel.*
- Sugar:** War Drafts Sugar for Double Duty, 2 ill., Mar. 9, 1942.
- Tea:** Ceylon, Where Japanese Threaten World's Tea Chest, 2 ill., Apr. 27, 1942.
- Teakettles Sing Around the World in Spite of War, Apr. 20, 1942.
- Tin:** Cornwall's Tin "Pixies" to Help United Nations, 1 ill., Oct. 5, 1942 (Geo-Graphic Brevity).
- Tin Can: A Trash-to-Treasure Success Story, Apr. 13, 1942.
- Additional ill.: Drilling for tin ore, Bolivia, May 18, 1942; Women sorting tin ore, Bolivia, Jan. 18, 1943.
- Vanilla:** Ills.: Native spreading seed pods, Tahiti, Feb. 23, 1942; Vanilla vine, Oct. 12, 1942.
- Wool:** Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.

PEOPLES AND CULTURES

- General:** Scientists Keep Digging in 1942, Jan. 18, 1943.
- Altars:** Ills.: Jaguar altar, Mexico, Mar. 16, 1942; Nashi priests dancing before outdoor altar, China, Feb. 1, 1943.
- Archeology:** Mysteries of Ancient American History Solved, 2 ill., Mar. 16, 1942.
- Scientists Kept Digging in 1942, Jan. 18, 1943.
- Additional ill.: Temple columns and carved figure, Mexico, Nov. 2, 1942; Ancient carved-stone statue, Colombia, Feb. 8, 1943.
- Beauty Shops:** Ill.: Street beauty shops, Hong Kong, Nov. 16, 1942.
- Castles and Palaces:** Ills.: Georgian castle, Caucasus Mountains, Nov. 23, 1942; Norman castle, Dover, England, Apr. 27, 1942.
- Children:** Ills.: Aleut children, Aleutian Islands, May 11, 1942; Oct. 19, 1942. Boy playing with sewing machine, Djibouti, French Somaliland, Jan. 25, 1943. Child in underground home, Tunisia, Jan. 4, 1943. Chinese children, Nov. 16, 1942. Family eating rice, Thailand, Apr. 20, 1942. Indian children: Aymará Indian baby, Bolivia, Jan. 18, 1943; Indian baby dressed up in parka, Yukon, Apr. 27, 1942. Korean children, Nov. 9, 1942. Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943. Native children: Boy opening coconut, Apakaki Island, Mar. 23, 1942; In doorway of home, Cameroons, Africa, Mar. 9, 1942; New Caledonia, May 18, 1942; New Hebrides, Dec. 14, 1942; Sumatra, Mar. 2, 1942. Russian school children, Oct. 12, 1942.
- Churches, Mosques, and Temples:** Ills.: Cave temple, Paungu Caves, Burma, Mar. 23, 1942; Temple attendant, Benares, India, Apr. 20, 1942; Interior of Jain temple, Rajputana, India, Apr. 20, 1942; Ancient temple, Mexico, Nov. 2, 1942; Interior of cathedral, Trondheim, Norway, Nov. 2, 1942.
- Coins:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.
- Additional ill.: Ancient money, shape of fishhook, nails, rings, and tree, Mar. 30, 1942.
- Commandos:** Commandos Raid Channel Steppingstone, Isle of Sark, Nov. 2, 1942.
- Dieppe Was Geography Problem for Commandos, Oct. 5, 1942 (Geo-Graphic Brevity).
- Costumes and Clothing:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.
- Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.
- Sikhs Had a Word for It: Khaki, 1 ill., Jan. 4, 1943 (Geo-Graphic Brevity).
- Silk Salvage Completes a Stocking Cycle, Nov. 30, 1942.
- Additional ill.: Street beauty shops, North Africa, 1 ill., Dec. 7, 1942 (Geo-Graphic Brevity).
- Additional ill.: Aviation Cadets, Randolph Field, Texas, May 18, 1942. Hair arrangements: Natives, New Guinea, Jan. 4, 1943; Natives wearing fishnet hairnet, New Guinea, Mar. 30, 1942. Hats: Hat vender, Ecuador, Nov. 16, 1942; Women mine workers wearing straw hats, Bolivia, Jan. 18, 1943; Native wearing bamboo hat, Bali, Mar. 9, 1942; Highlanders, Eritrea, Oct. 19, 1942. Indians: Tehuana Indian women, Mexico, Apr. 20, 1942; Indian baby dressed up in parka, Yukon, Apr. 27, 1942. Moslems: Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943; Moslems wearing burnouses, Tunisia, May 4, 1942; Negroes in Moslem dress, Libia, Jan. 18, 1943. Natives' dress: Native girl wearing *lambo*, Madagascar, Oct. 12, 1942; Native girls wearing tapa cloth *sulus* (sarongs), Fiji Islands, Nov. 23, 1942; Grass skirts, Marshall Islands, Mar. 2, 1942. Phoenician women, Levant

- Shepherds:** Ills.: Peruvian shepherdess, Mar. 2, 1942; Ingush shepherds, Caucasus Mountains, Nov. 23, 1942; Shepherd wearing poncho, Bolivia, Jan. 18, 1943.
- Soldiers:** Ills.: Cadets drilling, Japan, Apr. 13, 1942; Soldiers from India, Egypt, Oct. 5, 1942; Chinese soldiers, Hanchow, China, Oct. 19, 1942; U. S. soldiers and tank, Nov. 23, 1942.
- See also* Commandos.
- Sports and Games:** Ills.: Skiing, Mt. Buffalo, Australia, Mar. 16, 1942; Mountain climbing, Caucasus Mountains, Nov. 2, 1942.
- Tombs:** Ill.: Unearthing stockade tomb, La Venta, Mexico, Jan. 18, 1943.
- Toys:** Ills.: Rubber toys in Walt Disney characters, Apr. 13, 1942; Toy Mexican straw horse, Dec. 14, 1942.
- Vitamins:** ABC's of Vitamins for Victory, May 4, 1942.
- Weapons:** Ills.: War Booms Shark Fishing, 1 ill., Oct. 19, 1942 (Geo-Graphic Brevity).
Igorot spear and head ax, Philippine Islands, Mar. 16, 1942; Natives with bows and arrows, New Guinea, Mar. 30, 1942.
- See also* Guns, and Commerce, Industry, and Agriculture: Ammunition.
- Wells:** Ill.: Native sinking well in desert, French Equatorial Africa, Jan. 11, 1943.
- Women War Workers:** Women at Work: How Aunt America Helps Uncle Sam Fight, 2 ill., May 11, 1942.

NATURAL HISTORY

- Animals:** Madagascar Landscape a Freak Show of Nature, 2 ill., Oct. 12, 1942.
Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.
Additional ill.: Dogs: In jungle village, Sumatra, Mar. 2, 1942; Argentina, Dec. 7, 1942. Llamas, Peru, Mar. 2, 1942; Jan. 25, 1943. Native carrying pig, Bali, Mar. 9, 1942; Camels, Fezzan, Mar. 30, 1942; Caribou swimming Yukon River; Snake charmer with cobra and mongoose, Ceylon, Apr. 27, 1942; Turtle, Galapagos Islands, Oct. 12, 1942; Horses and cows in sight of outdoor class in agriculture, U. S. S. R., Jan. 11, 1943; Meat market, Tripoli, Libia, Jan. 18, 1943; Ocelot, Ecuador, Feb. 1, 1943. *See also* Commerce, Industry, and Agriculture: Pigs; Sheep and sheep raising; and Transportation: Animals.
- Birds:** Ills.: Sheep-eating parrot (*kea*), New Zealand, Apr. 13, 1942; Packing baby chicks in paper cartons, Virginia, Apr. 27, 1942; Natives with cassowary, Papua, Feb. 15, 1943.
- Cacti:** Ills.: Giant cardon cacti, Baja, California, Mar. 9, 1942; Cacti, Galapagos Islands, Oct. 12, 1942.
- Fish:** *See* Commerce, Industry, and Agriculture: Fish and Fishing.
- Fruit:** Ills.: Native boy opening coconut, Apataki Island, Mar. 23, 1942; Grapefruit tree, May 4, 1942; Fruit cluster of oil palm, Oct. 26, 1942.
- See also* Commerce, Industry, and Agriculture: Bananas, and Pineapples.
- Trees:** Madagascar Landscape a Freak Show of Nature, 2 ill., Oct. 12, 1942.
Additional ill.: Tree-ferns, Hawaii, Apr. 13, 1942; Grapefruit tree, Texas, May 4, 1942; Cacao tree, Oct. 12, 1942; Fruit cluster of oil palm, Oct. 26, 1942; Balata tree, Nov. 30, 1942; Orange trees with protection against ants, Brazil, Nov. 30, 1942; Date palms, Tunisia, Dec. 14, 1942; Banana trees, Panama, Feb. 1, 1943; preparing sago flour from sago palm, Papua, Feb. 15, 1943.

PHYSICAL GEOGRAPHY

- Caves:** Ill.: Cave temple, Paingau Caves, Burma, Mar. 23, 1942.
- Cliffs:** Ills.: North Cape, Norway, Oct. 19, 1942; Channel Islands, Nov. 2, 1942; Owen Stanley Mountains, New Guinea, Oct. 26, 1942.
- Deserts:** Exploring French North Africa's Desert Reaches, Dec. 7, 1942.
Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).
Additional ill.: Couriers for British forces, North Africa, Jan. 4, 1943; Native sinking well in desert, French Equatorial Africa, Jan. 11, 1943.
- Glacier:** Chalaat Glacier, Caucasus Mountains, Nov. 2, 1942.
- Lakes:** Chad, Mid-African French Colony, Named for "Breathing" Lake, Jan. 11, 1943.
Exploring French North Africa's Desert Reaches, Dec. 7, 1942.
Additional ill.: Lake Patateuro, Mexico, Mar. 2, 1942; Lake of Garda, Italy, Jan. 25, 1943.
- Lava:** Ill.: Lava mounds, Galapagos Islands, Oct. 12, 1942.
- Mountains:** Frosty Caucasus Wall, Russia's Mountain Rampart, 2 ill., Nov. 2, 1942.
Owen Stanley Mountains a Jungle Battleground, Oct. 26, 1942.
Additional ill.: Andes Mountains: Copper mine, Mar. 23, 1942; Peru, Jan. 25, 1943; Peak of Ausangate, Peru, Mar. 2, 1942; Himalayas, Asia, Mar. 16, 1942; Mount Kazbek, Caucasus Mountains, Nov. 23, 1942; Toros Mountains, Turkey, Feb. 15, 1943.
- Oases:** Ills.: Fezzan, Libia, Mar. 30, 1942; Meat market, Tripoli, Libia, Jan. 18, 1943.
- Rain Forest:** Ill.: New Guinea, Nov. 16, 1942.
- Rivers:** Egypt: An Innocent Bystander Embroiled (Nile River), 2 ill., 1 map, Oct. 5, 1942.
St. Lawrence Waters Exceed Great Lakes in Area, 1 ill., Nov. 9, 1942 (Geo-Graphic Brevity).
Additional ill.: Salween River gorge through Himalayas, Mar. 16, 1942; Caribou swimming Yukon River, Apr. 27, 1942; Fuji River, Japan, May 18, 1942; Laloki River waterfalls, New Guinea, Oct. 26, 1942; Angara River, U. S. S. R., Oct. 26, 1942; Sepik River, New Guinea, Nov. 16, 1942; Ziz River, Morocco, Dec. 7, 1942.
See also Transportation: Rivers.
- Snow:** Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).
- Volcanoes:** Ecuador: Equator Land of Ice and Volcanic Fire, 2 ill., 1 map, Feb. 1, 1943.
Additional ill.: Mount Fuji, Japan, May 18, 1942.
- Waterfalls:** Ill.: Rona Falls, New Guinea, Oct. 26, 1942.
- Weather:** Exploring French North Africa's Desert Reaches, Dec. 7, 1942.
Flat Russia's Winter Sweeps Far South, Oct. 26, 1942.
Oddities of Tunisia, Jan. 4, 1943.
Rain Hampers Both Sides in New Guinea Battles, Nov. 16, 1942.
Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).
See also Winds.
- Winds:** Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).
Monsoon Lords It over Asiatic Battlefields, 1 ill., May 18, 1942 (Geo-Graphic Brevity).

SCIENCE

- Chemistry:** Casein Can Make Miss Muffet a Modern Glamour Girl, Jan. 11, 1943.
- Engineering:** World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.
- Machinery, Instruments, Etc.:** Graphite for Writing and Fighting, Jan. 25, 1943.
Women at Work: How Aunt America Helps Uncle Sam Fight, 2 ill., May 11, 1942.
Additional ill.: Manganese steel in drop forge, May 4, 1942; "Burner" using acetylene torch, Oct. 5, 1942; Oil geologist surveying, New Guinea, Nov. 16, 1942.
- Radio:** Strategic Materials (No. 12): Quartz Crystal, Robot Boss of Radio, 2 ill., May 11, 1942.

